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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/996,244	11/28/2001	Daniel Richard Schaefer	594826-001	3771

27805 7590 03/21/2002

THOMPSON HINE L.L.P.  
2000 COURTHOUSE PLAZA, N.E.  
10 WEST SECOND STREET  
DAYTON, OH 45402

EXAMINER

BEHREND, HARVEY E

ART UNIT PAPER NUMBER

3641

DATE MAILED: 03/21/2002

Please find below and/or attached an Office communication concerning this application or proceeding.



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DATE MAILED:

This is a communication from the examiner in charge of your application.  
COMMISSIONER OF PATENTS AND TRADEMARKS

☒ This application has been examined ☐ Responsive to communication filed on \_\_\_\_\_ ☐ This action is made final.

A shortened statutory period for response to this action is set to expire one month(s), \_\_\_\_\_ days from the date of this letter.  
Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:

- |                                                                                     |                                                                                   |
|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| 1. <input type="checkbox"/> Notice of References Cited by Examiner, PTO-892.        | 2. <input type="checkbox"/> Notice of Draftsman's Patent Drawing Review, PTO-948. |
| 3. <input type="checkbox"/> Notice of Art Cited by Applicant, PTO-1449.             | 4. <input type="checkbox"/> Notice of Informal Patent Application, PTO-152.       |
| 5. <input type="checkbox"/> Information on How to Effect Drawing Changes, PTO-1474. | 6. <input type="checkbox"/> _____                                                 |

Part II SUMMARY OF ACTION

1. ☒ Claims 1-28 are pending in the application.

Of the above, claims \_\_\_\_\_ are withdrawn from consideration.

2. ☐ Claims \_\_\_\_\_ have been cancelled.

3. ☐ Claims \_\_\_\_\_ are allowed.

4. ☐ Claims \_\_\_\_\_ are rejected.

5. ☐ Claims \_\_\_\_\_ are objected to.

6. ☒ Claims 1-28 are subject to restriction or election requirement.

7. ☐ This application has been filed with informal drawings under 37 C.F.R. 1.85 which are acceptable for examination purposes.

8. ☐ Formal drawings are required in response to this Office action.

9. ☐ The corrected or substitute drawings have been received on \_\_\_\_\_. Under 37 C.F.R. 1.84 these drawings are ☐ acceptable; ☐ not acceptable (see explanation or Notice of Draftsman's Patent Drawing Review, PTO-948).

10. ☐ The proposed additional or substitute sheet(s) of drawings, filed on \_\_\_\_\_, has (have) been ☐ approved by the examiner; ☐ disapproved by the examiner (see explanation).

11. ☐ The proposed drawing correction, filed \_\_\_\_\_, has been ☐ approved; ☐ disapproved (see explanation).

12. ☐ Acknowledgement is made of the claim for priority under 35 U.S.C. 119. The certified copy has ☐ been received ☐ not been received ☐ been filed in parent application, serial no. \_\_\_\_\_; filed on \_\_\_\_\_.

13. ☐ Since this application appears to be in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.

14. ☐ Other

EXAMINER'S ACTION

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1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claims 1-3, 7 drawn to an invention, classified in class 423, subclass 445B.
  - II. Claims 4-6, drawn to an invention, classified in class 315, subclass 500.
  - III. Claims 8-11, 19, drawn to an invention, classified in class 250, subclass 493.1.
  - IV. Claims 12-18, drawn to an invention, classified in class 376, subclass 100.
  - V. Claims 20-28, drawn to an invention, classified in class 376, subclass 317.

2. The inventions are distinct, each from the other because of the following reasons:

Inventions I and V are related as process of making and product made. The inventions are distinct if either or both of the following can be shown (1) that the process as claimed can be used to make other and materially different products or (2) that the product as claimed can be made by another and materially different process (MPEP §806.05(f)). In the instant case the product as claimed can be made by another and materially different process such as a process wherein a radioactive material whose decay products include neutrons, is encapsulated in a fullerene molecule.

Inventions I and (II, III, IV) are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP §806.05 (h)). In the instant case the product as

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claimed can be used in a materially different manner such as in transmuting radioactive waste material into a less hazardous material.

Each of inventions II, III, IV and V are clearly independent and distinct, each from the other.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

Applicant is advised that the response to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed.

2. If the invention of Group III is elected, applicant is required under 35 U.S.C. 121 to elect a single ultimate species of a manner of disassembling the fullerene molecule (e.g. see claims 9 and 10) for purposes of examination. This additional requirement is to facilitate examining due to the widely varying and diverse manners of disassembling the fullerene molecule (as recited for example in said claims 9 and 10).

3. If the invention of Group IV is elected, applicant is required under 35 USC 121 to elect one of the following disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable (currently, no claim is generic):

IV A. The embodiment wherein the neutrons decay into protons.

IV B. The embodiment wherein the neutrons transition into anti-neutrons via neutron/anti-neutron oscillation.

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IV C. The embodiment wherein undecayed neutron combine with protons to form deuterium, tritium or a mixture thereof.

4. If the invention of Group V is elected, applicant is further required under 35 USC 121 to elect one of the following disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable (currently, claim 20 is generic).

V A. The embodiment wherein the source of neutrons is uranium-235.

V B. The embodiment wherein the source of neutrons is plutonium-239.

V C. The embodiment wherein the source of neutrons is a target which generates neutrons upon bombardment with charged particles from a particle accelerator.

V D. The embodiment wherein the source of neutrons is a target which generates neutrons upon bombardment with charged particles from a radionuclide.

5. Applicant is advised that a response to the species restriction requirements, must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a generic claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims

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are added after the election, applicant must indicate which are readable upon the elected species. MPEP 809.02(a).

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103 of the other invention.

6. For applicants benefit, it is pointed out that claim 16 should apparently have been dependent on claim 14 so as to provide proper antecedent basis for the term "anti-neutrons".


7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Harvey Behrend whose telephone number is 703-305-1831. The examiner can normally be reached on Tuesday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Carone, can be reached on (703) 306-4198. The fax phone number for the organization where this application or proceeding is assigned is 703-306-4195.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-306-1113.

Behrend/cw  
February 26, 2002



HARVEY E. BEHREND  
PRIMARY EXAMINER